



DOMINICA

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

AND

FORESTRY

1958





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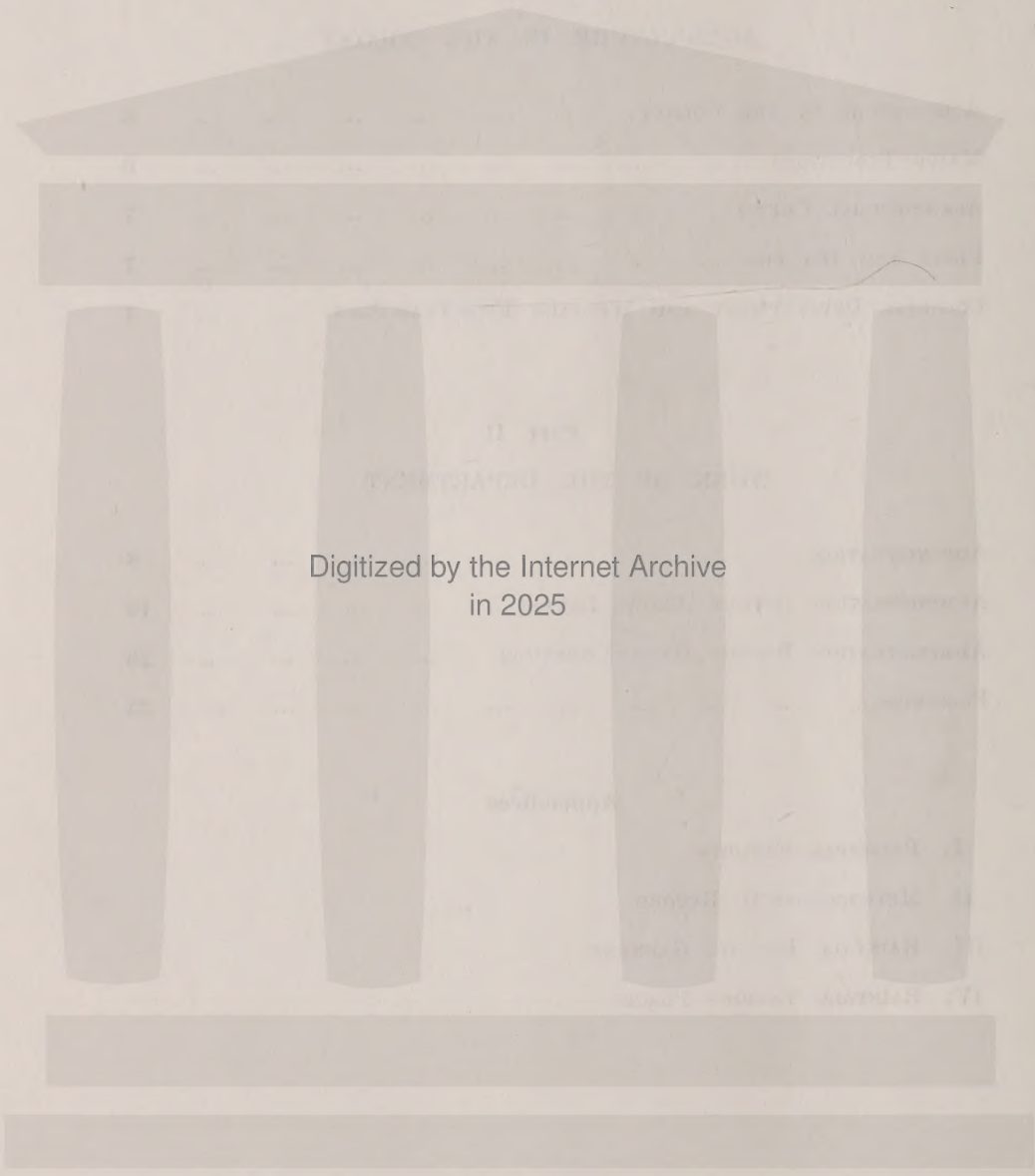
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ADMINISTRATION REPORT

OF THE

DEPARTMENT OF AGRICULTURE

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INTRODUCTION

There were no changes in senior staff during the year but the Crown Lands Officer was on long leave from 8th May to 22nd November, the Assistant Agricultural Superintendent was on long leave from 26th June to the end of the year and Dr. Chappel the Veterinary Officer went on leave in December prior to taking up another appointment in Jamaica.

2. Weather conditions in general were favourable to agriculture. There was only a short if sharp dry spell in February and March with adequate and well distributed rainfall afterward. There were however three windstorms recorded which did varying degrees of damage to bananas.

3. The price of limes was very good indeed varying from \$8.30 to \$7.30 per barrel in 1958.

4. The value of banana exports to total domestic exports fell from 67% in 1957 to 57% in 1958. This was due to increased quantities and values of lime products vanilla and cocoa.

AGRICULTURAL POLICY

5. The policy of the Department remains unchanged and may be summarized under the following main heads:—

- (i) The Conservation of the agricultural and forest resources;
- (ii) The maintenance, expansion and improvement of the Colony's main export crops;
- (iii) The organisation and improvement of peasant agriculture;
- (iv) The re-organisation and improvement of the livestock industry;
- (v) Greater efficiency in production, processing and distribution of agricultural products;
- (vi) Improvement in the form of land tenure.

6. The implementation of these main heads of policy progresses as circumstances, funds and the availability of trained staff permit.

PART I.

AGRICULTURE IN THE COLONY

7. *Weather Conditions:* In 1958 the total rainfall at the Botanic Gardens was 85.48 inches being above the 25 year average of 79.90 inches. The greatest rainfall in 24 hours was 6.04 inches recorded on 1st October.

8. No hurricanes approached or passed near to the island but three strong windstorms occurred on 4th July, 30th August and 13th September.

9. The mean maximum and minimum temperatures for 1958 were 89°F and 70°F respectively.

10. The mean barometric pressure was 29.950 inches of mercury. The highest recorded was 30.150 inches on 23rd June and the lowest 29.801 inches on 25th September.

11. The mean relative humidity for the year was 70.5%.

MAJOR INDUSTRIES

12. The total value of domestic exports in 1958 was \$6,538,000 an increase of 34% over the 1957 value. This reflects the generally suitable weather conditions combined with greater production of lime products, more than double, cocoa three times, vanillas eight times and bananas 17% increase in spite of severe windstorm damage. A table of exports appears in Appendix II of this Report.

13. *Lime Industry:* The weather was almost ideal for lime production and the trees suffered little from the windstorms. These conditions combined with high prices had a most encouraging effect on the interest being taken in the future of this valuable crop.

14. The total production of lime products based on exports is shown in the following table:—

PRODUCTS	1957	1958
Settled Lime Juice	326,000 gals	582,000 gals
Lime Juice Top Pulp	120,000 gals	145,000 gals
Pomace of Dried Lime Skins	261,000 lbs	274,000 lbs
Distilled Lime Oil	20,000 gals	43,000 gals

15. *Other Citrus:* The Grapefruit and Orange crops were not as large as might have been expected but actual exports of fresh fruit are dependent on the very erratic availability of shipping space. The exports of fresh fruit were merely half of those for 1957 Grapefruit 14,337 crates in 1958 as against 23,689 in 1957 while oranges were 4,943 crates in 1958 as against 10,993 in 1957. Part of the drop in exports was however made up for by the rapid increase in the exports of canned grapefruit segments which was only 116,000 lbs in 1957 but rose to 426,000 lbs in 1958.

16. *Bananas:* After the severe set back due to drought in 1957 banana expansion was continued and final production figures show that a total of 1,638,000 stems were exported in 1958, an increase of 17% over 1957. Windstorm damage to this crop, estimated at approximately 15% of the estimated production to the end of December, the inefficient control of leaf spot disease during the first nine months of the year and the complete cessation of spraying against leaf spot disease for the last three months of the year prevented a greater increase in production. The following shows the export quantities and values of bananas exported over the last eight years:—

YEAR	STEMS EXPORTED	VALUE (\$)
1951	576,770	720,527
1952	856,856	1,073,426
1953	1,135,746	1,792,858
1954	1,352,010	2,308,320
1955	1,374,260	2,484,931
1956	1,803,000	3,793,000
1957	1,398,000	3,719,000
1958	1,638,000	—

17. *Cocoa*: The decline in cocoa exports of the past few years has stopped and 1958 shows an increase of from 189,000 lbs in 1957 to 333,000 lbs. This increase is due to the effect of new fields of clonal cocoa which have come into bearing. This effect was predicted in a previous report and exports should now continue to rise each year. During 1958 some 60,000 cuttings were distributed.

18. *Coconut*: The improved interest in coconuts shown in the past few years has continued and production should continue to increase in the years to come. Actual exports of copra were less than in 1957 but this is thought to be due to an increase in the amount of copra expressed into crude coconut oil by one large producer.

19. *Coffee*: Nurseries of selected Robusta Coffee established in 1957 produced some 5,000 plants for distribution in 1958. Pulped coffee seed obtained from Trinidad in 1958 did not give very satisfactory germination and plants available are estimated at 15,000.

20. *Vanillas*: As previously noted, after a poor year in 1957 which involved high prices the production in 1958 was boosted to 11,500

21. The main development in the keeping of livestock has been the rapid expansion in the production of poultry and eggs, very little improvement can be recorded in the keeping of other types of livestock. The supply of local food crops has been erratic and inadequate.

AGRICULTURAL CREDIT

22. The Dominica Banana Association has had to curtail its fertilizer credit scheme through shortage of funds. There is even more urgent need now to provide large quantities of Agricultural Credit if agriculture is to become more efficient and new areas are to be brought into production. No further loans were issued by the Agricultural Loans Board for banana cultivation. It is understood that much difficulty has been experienced in collecting amounts previously issued for this purpose.

PESTS AND DISEASES

23. Leaf Spot disease of bananas was, as usual, the disease requiring major attention. Unfortunately, due to certain disorganising aspects within the Leaf Spot Control Organisation, a branch of the Banana Growers Association, spraying operations were interrupted for the greater part of the year. This had an undesirable effect on the year's production. No other plant diseases of importance were encountered.

24. The Colonial Development & Welfare Research Scheme for the Biological Control of the more important crop pests continued to operate and is reported on under the section of this report dealing with "Investigational Work."

25. A small anti-rat campaign continued. Operations essentially comprised the free distribution of "warfarin" to farmers and to householders.

COLONIAL DEVELOPMENT & WELFARE SCHEMES

26. The following schemes were in operation during the year:—

Scheme D 1042 & A	Demarcation of Forest Reserves
" D 1743 & A	Control of Government Lands
" D 2621	Agricultural Stations
" D 2658	Training of J. A. John and A. E. Samuel at E.C.F.I.
" D 2659 (13)	Training in Agriculture at I.C.T.A. — Henderson
" D 2717 (37)	Starch Processing Mill at La Plaine
" D 2717 (47)	Establishment of Pangola Grass Plot
" D 2856	Cocoa Propagation
" D 2952	Central Livestock Farm
" D 3012	Commissioner for Agricultural Development
" D 3196	Purchase of Tractor for Agricultural Purposes
" D 3232	Forestry Improvement
" D 3446 (45)	Training at E.C.F.I. (C. S. Douglas)
" D 3446 (11)	Training of A. Guye Cocoa
" D 3446 (12)	Training of T. H. Henderson in Food Crop Research
" D 3448 — 12	Audio — Visual Aid Equipment
" D 3448 — 13	Establishment of Coffee Nursery Rosalie
" D 3462	Development of Fisheries Industry
" D 3677	Marketing of Local Food Stuffs
" D 3737	Soil Conservation Work
" R 881	Control of Insect Pests.

PART II WORK OF THE DEPARTMENT

ADMINISTRATION

27. The organisation and distribution of the Department's work continued along those lines initiated in 1957, the efficacy of the system having its desired effect particularly in the Extension Division. The expanding road-building programme with the consequent opening up of new lands however, is gradually beginning to amplify the need for an increased Extension and Specialist Staff. The all important matter of the training of Staff-in-post whilst having its temporary inconveniences shows much promise for the ultimate good. Five officers were in training during the year.

BOTANICAL GARDENS

28. *Weather:* Despite a total rainfall of 85.48 inches which was well within average, extremely dry conditions prevailed during the early part of the year. 3.75 inches only, fell during the first quarter, compared with 16.04 for the same period in 1957. High winds of gale force accompanied by heavy precipitations occurred during the hurricane months July, August and September, causing land-slides and damage to several trees.

29. *Ornamental:* A July gale uprooted and destroyed a full-grown specimen of "*Peltophrum africanum*" and "*Phoenix dactylifera*". Several Saman trees circling the cricket field lost many large branches.

30. Besides the clean-up work carried out after the gales, routine pruning of older trees and shrubs received much attention. The large Saman which was situated in the library grounds and which proved an increasing source of damage to the nearby roof of the Library building and electricity power lines was felled.

31. The constant mowing of lawns in the ornamental sections formed a major part of routine operations. The entire area of lawn was treated with aldrin in the control of mole cricket and army-worm attacks. Greater emphasis was placed on the propagation of ornamental shrubs but the demand for such plants was disappointing.

32. *Roads:* Preliminary resurfacing work was commenced on the 200 yard driveway which connects the administrative buildings with the central driveway.

33. A Heavy cloudburst in October caused landslides in the wooded upper area and these damaged two sections of the "Lovers Lane" walk. Repairs which involved the construction of a masonry retaining wall were effected with the assistance of the Public Works Department.

34. *Building and Equipment:* An extension was added to the southern and western wing of the main administrative building to accommodate senior staff of the Extension division.

35. The old storerooms and fumigating chamber adjacent to the Foreman's office were demolished and replaced with a building designed to serve as a storeroom for tools, insecticides, and fertilisers. A proper fumigating chamber and carpenter's shed have also been incorporated in the new building.

An "Allen" scythe was purchased to assist in the control of rapid growth of grass especially in the more shaded sections where growth tends to be rank and quick during the rainy season.

36. Certain engine-driven lawn mowers including a "gang" trailer type, have been obtained in an attempt to replace the ordinary hand-pushed type of lawn mowers.

37. *Visit of Curator, Royal Botanic Gardens, Kew:* The highlight of the year's activities was a visit of Mr. W. M. Campbell, Curator of the Royal Botanic Gardens Kew, who at the request of local Government, visited the island for the particular purpose of examining the Botanic Gardens and making recommendations for their rehabilitation. Opportunity was also taken during his visit to examine other Government owned public grounds and in preparing detailed plans for their improvement and beautification; these included the Government House Grounds, the Government Office Yard, the Library Grounds, "Peebles" Park, the Cenotaph, Windsor Park, New-Town Savannah, Benjamin's Park, Portsmouth, and "Lindo" Park with adjacent open areas at Goodwill.

38. The major part of the visit was spent in examining in detail the 40 odd acres comprising the Botanic Gardens where not a single plant specimen was overlooked.

39. Several collections were made of local plant material and shipped to Kew Gardens for inclusion in its collections. Such shipments included the following:—

Cocos amara
Attalea cohune
Lantania Loddigesii
Raphia vinifera
Elaeocarpus ganitrus
Caesalpinia Sappan
Byrsonima spicata
Sabinea carinalis
Pandanus luzonensis.

In addition, several varieties of ferns, orchids and uncultivated epiphytes common to the forest were included in shipments.

40. A film show on the Royal Botanic Gardens, Kew was given by Mr. Campbell during his visit. This was well attended by an appreciative audience.

41. Many horticultural enthusiasts made frequent calls on the Curator during his visit to benefit from discussions and from his advice.

42. Preliminary work has commenced on those points outlined by Mr. Campbell for action in the rehabilitation programme of the gardens.

43. *Seed Exchange*: The following were received:—

NAMES								ORIGIN
Antedemina bunius	...	...	...	...	...	...	...	Peradeniya, Ceylon
Solanum macranthum	...	...	...	...	...	...	...	" "
Ficus elastica	...	...	...	...	...	...	...	" "
Anona muricata	...	...	...	...	...	...	...	" "
Aegle Marmelos	...	...	...	...	...	...	...	" "
Encephalartos hildebrandtii	...	...	...	...	...	...	...	" "
Cordis sebestana	...	...	...	...	...	...	...	" "
Anona reticulata	...	...	...	...	...	...	...	" "
Pentadeoma butylacea	...	...	...	...	...	...	...	" "
Tecoma Stans	...	...	...	...	...	...	...	" "
Trachylobium verrucosum	...	...	...	...	...	...	...	" "
Antedemina bunius	...	...	...	...	...	...	...	U. S. A.
Clycine max	...	...	...	...	...	...	...	Trinidad
Theobroma Sp (7 clones)	...	...	...	...	...	...	...	" "
Saccharum officinarum (B49119)	...	...	...	...	...	...	...	Barbados
Camellia sinensis	...	...	...	...	...	...	...	India
Citrus Sp	...	...	...	...	...	...	...	Jamaica

44. *Miscellaneous*: Activities in the economic section of the Botanic Gardens continued in the form of the cultivation and care of orchard crops chiefly citrus and bananas; vegetable gardening, and citrus nurseries.

45. A "Howard Gem" Rotary hoe was put on trial with a view to its purchase for cultivating in this section of the garden. Purchase was decided against as the particular model proved difficult to manoeuvre in restricted spaces.

EXTENSION SERVICES

46. The island remained divided into three main sections. Referred to as the Northern District, the Central District and the Southern District. These divisions were made with regard to topography and for easy communications in order to avoid as far as possible any over-lapping of the senior staff. These main districts are further subdivided into smaller agricultural districts.

47. The Extension staff consists of one Assistant Agricultural Superintendent, three Agricultural Assistants and fifteen Agricultural Instructors.

48. There is also an Agricultural Assistant Animal Husbandry who operates in close liaison with the veterinary officer. In addition he receives co-operation from all extension officers in matters pertaining to Animal Husbandry.

49. The remaining Agricultural Assistant, Cocoa, maintains control of and responsibility for Cocoa Propagation over the island and works in close co-operation with the Assistant Agricultural Superintendent and the extension staff generally.

50. *Extension Staff List*:

ASSISTANT AGRICULTURAL
SUPERINTENDENT

S. O. Pringle

AGRICULTURAL ASSISTANT
NORTHERN DISTRICT

J. H. Elwin

AGRICULTURAL ASSISTANT
CENTRAL DISTRICT

J. H. C. Grell

AGRICULTURAL ASSISTANT
SOUTHERN DISTRICT

R. S. Fadelle

AGRICULTURAL
INSTRUCTORS

F. P. Carbon Grade I
J. A. John „ II
E. W. Jones „ III
J. A. Defoe „ III
R. J. Patrice „ III

AGRICULTURAL
INSTRUCTORS

T. H. Henderson Grade I
A. Guye ag.
J. B. Colaire „ II
A. E. Samuel „ II
E. Daniel „ III
P. Bobb „ III
R. S. Maynard „ III

AGRICULTURAL
INSTRUCTORS

W. G. Coipel Grade I
C. S. Douglas „ II
L. M. Christian „ II
J. D. McIntyre „ III
R. Jno. Cuffy „ III
P. S. James „ III
Acting

51. The following members of the staff in post were undergoing training during the period under review:—

Mr. T. H. Henderson, due to complete his studies at the I.C.T.A. Trinidad by mid 1959.

Mr. A. Guye returned from the E.C.F.I. Trinidad in June and acted Grade I vice T. H. Henderson.

Messrs A. E. Samuel, J. A. John and C. S. Douglas underwent training at the E.C.F.I. Trinidad.

52. The Agricultural Apprentice Training Scheme operated by the department continued. Thirteen young men, including one private student were in training during the year.

53. Early this year the Soil Conservation Instructors attached to the Crown Land Branch were placed under the discipline and immediate supervision of the Agricultural Assistants. This change enhanced the extension work activities. It became possible to utilise the services of these men on extension work when they were not required to fulfill the requirements of the Crown Lands Office.

54. *Soil Conservation Instructors:*

NORTHERN DISTRICT

S. P. James
J. Robinson
R. Watty
R. Patrice

CENTRAL DISTRICT

T. G. Cuffy
V. Didier
B. Winston
W. Williams
A. D. Wiltshire
A. J. Felix
E. D. Coipel

SOUTHERN DISTRICT

P. S. James
L. J. Laronde
J. C. Henderson

55. *Staff Changes:* Messrs. S. F. Rodney and K. Jno. Baptiste Agricultural Instructors Grades II & III respectively tendered their resignation.

Mr. R. P. Lander Agricultural Instructor Grade I was transferred to the Post of Foreman Botanic Gardens.

Mr. W. C. Coipel Foreman Botanic Gardens was transferred to the post of Agricultural Instructor Grade I.

Mr. F. P. Carbon Agricultural Instructor Grade I was transferred from the Southern District to the Northern District.

Mr. J. D. McIntyre Agricultural Instructor Grade III was seconded to the Fisheries division.

Mr. L. M. Christian Agricultural Instructor Grade II who acted Foreman Botanic Gardens returned to his post in June.

Mr. A. Guye returned from the Eastern Caribbean Farm Institute, Trinidad, in June.

Mr. C. S. Douglas left the island in September for the Eastern Caribbean Farm Institute, Trinidad, where he joined Messrs. J. John and A. E. Samuel who had proceeded there during the previous years.

Messrs J. C. Henderson and R. J. Patrice Soil Conservation Instructors were appointed to act Agricultural Instructors Grade III at Grand Bay and Portsmouth respectively.

Mr. E. S. Lancaster who had been seconded as Manager of the Central Livestock Farm returned to his substantive post and does specific work connected with produce inspection.

Vacation Leave was granted to the following officers:—

Assistant Agricultural Superintendent S. O. Pringle was granted six months overseas leave as from 26th June.

Agricultural Instructor Grade I, F. P. Carbon was granted 144 days as from 28th August.

Veterinary Officer, C. N. Chappel 154 days as from 7th December.

Agricultural Assistant, R. S. Fadelle 72 days as from 19th January.

Due to the many changes among the staff it will be apparent that discontinuity of service in one area or another was unavoidable.

56. *Extension Work:* The dissemination of agricultural knowledge is the primary aim of the extension work performed. In order to achieve this the activities of the extension staff may be summarised as follows:—

- (a) Demonstration of measures for maintaining basic soil fertility—Soil Conservation, Crop Rotation, Proper land use, Keeping of livestock, use of Farm Yard Manure and Artificial Fertilisers.
- (b) Demonstration of improved practice in farming aimed at improved standards and increased output.
- (c) Demonstration of the control of diseases and pest.

Visits to Holdings:—

PERIOD						No. of Visits to Holdings	Visits to School Gardens	No. of Visits to Crown Lands
1957	...	...	...	...	...	1,675	—	—
1958	...	...	...	...	...	2,765	60	753

The movements of Soil Conservation Instructors on Crown Lands is controlled by the Crown Lands Officer.

At first glance the temptation might be to attribute this increase in the number of holdings visited to a greater output on the part of Agricultural Instructors. While this has been so in some cases the main cause of this rise can be credited to the Soil Conservation Instructors who became available for extension work.

57. *Crops:* It is of interest to outline how the field staff of the Central District devoted its efforts to the various cultural practices in respect of the various crops.

58. *Bananas:* One hundred and sixteen (116) visits were paid to seventy nine (79) holdings.

The purpose of visits to Banana holdings may be listed as follows:—

Lining	...	...	...	...	...	...	...	...	30.6%
Preparation of holes	...	...	...	...	...	...	...	...	2.7
Manuring	...	...	...	...	...	...	...	...	2.7
Pruning	...	...	...	...	...	...	...	...	9.0
Pests & Disease Control	...	...	...	...	...	...	...	...	9.0
Inspection & Advice	...	...	...	...	...	...	...	...	45.0

59. Apart from some damage to cultivation by winds during the rainy season, the set back to banana production would appear to be a general increase in the incidence of Leaf Spot disease.

60. Officers made periodic visits to the Banana Reception Stations and assisted in the introduction of the new wrapping technique of bunches. The S.C.I. at Castle Bruce should be commended on his efforts to curtail the presentation of stale fruit for export.

61. *Cocoa:* Overall interest in the extension of Cocoa showed a decline. This was most probably due to the severe drought that existed during the first half of the year rendering conditions unfavourable for the preparation of land to receive planting material.

62. The services of Mr. A. Guye were made available to certain estates equipped for propagating cocoa cuttings, where his knowledge of Nursery and Propagator technique proved to be helpful.

63. 338 inspections were made on 167 holdings. The activities on the holdings may be classified as follows:—

Selection of land for crop	...	...	...	...	...	...	9.2%
Completing applications for plants	...	...	...	...	...	...	18.4
Lining	...	...	...	...	...	...	14.2
Preparation of holes	...	...	...	...	...	...	4.6
Planting	...	...	...	...	...	...	5.3
Manuring	...	...	...	...	...	...	0.9
Pruning	...	...	...	...	...	...	33.6
Estates' Propagators	...	...	...	...	...	...	0.9
Pests & Diseases Control	...	...	...	...	...	...	0.9
General Inspection	...	...	...	...	...	...	12.0

64. *Grapefruit*: Seventy (70) demonstrations were made on twenty holdings, and may be classified as follows:—

Selection of Suitable land	...	...	...	...	...	...	8.5%
Lining	...	...	...	...	...	...	17.1
Preparations of holes	...	...	...	...	...	...	2.8
Planting	...	...	...	...	...	...	5.7
Pruning	...	...	...	...	...	...	1.4
Topworking	...	...	...	...	...	...	60.0
General Inspection	...	...	...	...	...	...	4.2

65. The bulk of the Topworking of citrus species into grapefruit was done by the District Officer resident at Massacre who continues to be in demand not only as a reliable propagator but also in Lining for crops and Soil Conservation measures.

66. *Limes*: The rise in price of limes per barrel, \$7.80 during the early part of the year acted as a stimulus to those contemplating rejuvenation of cultivation by the use of new planting material. As a result the Department was inundated with applications for plants and much to the regret of applicants there seemed to be no one sufficiently efficient as to be able to fill the requirements at such short notice. Whereas the interest in limes was 1.9% in 1957 the demands of the staff in 1958 caused 10.3% of its time to be spent in the extension of that commodity.

67. Fifty three holdings received one hundred and eighteen inspections. The Field Staff occupied their time on the holdings headed by a single demonstration of 529 holes prepared on the contour at a spacing of 25ft. Demonstration on Holdings may be classified as follows:—

Selection of suitable areas	...	...	...	...	...	...	4.2%
Completion of plant applications	...	...	...	...	...	...	21.0
Lining	...	...	...	...	...	...	24.5
Preparation of holes	...	...	...	...	...	...	6.7
Planting	...	...	...	...	...	...	4.2
Manuring	...	...	...	...	...	...	1.7
Pruning	...	...	...	...	...	...	9.1
Pests & Disease Control	...	...	...	...	...	...	0.8
Budding & Grafting	...	...	...	...	...	...	16.1
General Inspection	...	...	...	...	...	...	11.0

From the above figures can be noted the lag between applications 21% or lining 24.5% and planting 4.2%. The explanation in this case is that demand for plants exceeded supply, with every hope of a balance being struck in May 1959. Noted also should be the grafting of stocks on holdings 16.1%.

68. *Oranges*: In this connection, thirty two inspections were conducted on twenty four holdings.

Selection of suitable site	...	...	...	...	...	...	19.0%
Completion of applications	...	...	...	...	...	...	25.0
Lining	...	...	...	...	...	...	6.2
Preparation of holes	...	...	...	...	...	...	99.4
Planting	...	...	...	...	...	...	3.1
Manuring	...	...	...	...	...	...	6.2
Pruning	...	...	...	...	...	...	9.4
Disease Control	...	...	...	...	...	...	3.1
Budding and Grafting	...	...	...	...	...	...	6.2
General Inspections	...	...	...	...	...	...	12.4

69. The Extension Service Staff were constantly engaged in maintaining contact with the Farming Community. The purpose of these visits may be classified under the following heads:—

- (a) Soil Conservation — Demonstrations and laying out of Conservation Works.
- (b) Crop Husbandry — Demonstration in the cultural aspects of — particularly with Bananas, Cocoa, Limes and other Citrus, Cocoanuts and Coffee and Vegetables.
- (c) Livestock — Control of internal and external parasites, Pig Revolving Herd Scheme, rendering first aid in the absence of the Veterinary officer, improving husbandry.
- (d) Produce Inspection — Connected mainly with the export of Vanillas and Citrus fruit. The curing of cocoa is receiving more attention as also the proper handling of bananas.

- (e) Crop Valuation — Largely in co-operation with the Public Works Department road construction programme.
- (f) Loan Application — For banana cultivation extension and rehabilitation.
- (g) Pests and Disease Control — Particularly with Banana Leaf Spot, Insect pests of Bananas and Citrus and rat control measures.
- (h) Plant Protection — Precautions against the introduction of diseased material as also the exportation of such.
- (i) Agricultural Small Tenancies — Mainly as arbitrators for purposes of valuations.

70. *Agricultural Extension Education Methods:* Emphasis was placed on the advantages of the group approach to the Farming Community. Field demonstrations on individual holdings were arranged at frequent intervals and neighbouring farmers were asked to attend.

71. 4 H. Clubs have been organised as follows:—

Wesley	Membership	...	...	...	...	...	20
Woodford Hill	"	...	...	...	...	...	15
Calibishie	"	...	...	...	...	...	14
Dos D'ane	"	...	...	...	...	...	10

These may be described as struggling along with "teething troubles."

72. Periodic visits were made to schools and where land space permitted a school garden, advice thereon was given. It is to be hoped that many more schools in the districts will be better prepared as entrants to the 1959 School Garden competition.

73. The Agricultural Society of Colihaut which the District Officer, was instrumental in founding and is one of its Committee Members, has celebrated its first anniversary.

74. Opportunity was taken to hold agricultural meetings in the rural areas. There were twenty nine meetings during the year. Subjects for lectures were, Banana Cultivation, Cocoa Cultivation, Coffee Cultivation, Curing of Cocoa for Market, Leaf Spot Disease of Bananas, Pangola Grass as a Crop, Crop Rotation, Farm improvements.

75. The main field days were held at the Grand Bay Agricultural Station, the La Plaine Agricultural Station, Colihaut Agricultural Station, Woodford Hill Estate, Marigot, Sugar Loaf Estates.

76. The opportunity to make use of the Windward Islands Broadcasting Service was the latest step forward in local extension work. Broadcasts were given by Senior Staff members on the following subjects with particular reference to Dominica:—

1. Agricultural Development
2. Soil Conservation
3. Banana Cultivation
4. Animal Husbandry

77. *Agricultural Stations:* Five Agricultural Stations were maintained with the following functions:—

- (i) Demonstration of improved cultural methods — Every opportunity is taken to demonstrate proper Land Use, Soil Conservation, diversification in the Cropping Programme, Mixed Farming and Crop Rotations with grass as a crop and Livestock as an integral part of the Farming Programme.
- (ii) Investigational Work — Provides a source from which the extension staff can gather information and pass on to the farming community. Further details are set out elsewhere in this report.
- (iii) Maintenance of stud animals for Public Service — Effort is made to keep on each station at least one Bull, One Ram and One Buck. Service is given to the public at highly subsidised rates. Unfortunately distance from Agricultural Stations Stud Centres often militates against the usefulness of this service to farmers. The need for more Stud Service Centres is evident.
- (iv) Plant Propagation and Distribution — The demand for plants is largely dependent on trends of the markets in respect of the various crops. An unexpected increase in the price of Limes created a demand for plants far in excess of the quantity that were produced.

78. The demand for Cocoa Plants is still greater than the supply. In order to cope with the situation, a propagating unit has been established at the Londonderry Agricultural Station. To meet the situation in the Eastern area a start has been made to construct a propagating unit at the La Plaine Agricultural Station, which should be in full production in 1959. A Hydraulic Ram has been installed to provide the water supply.

79. Provision is made for the importation of Green Vegetable seeds. These are retailed at the Botanic Gardens and at all Agricultural Stations. There has been a steady and growing demand for these seeds. This is a clear indication that the populace are being educated to appreciate the value of green vegetables in their diet. The efforts of the Social Welfare Department in conducting a 3-F Campaign must have contributed greatly in this direction. Close co-operation with their extension staff is maintained.

80. *Plant Propagation & Distribution:* The following planting materials were distributed from the propagation centres:—

PLANTING MATERIALS	1957	1958
West Indian Limes	2,024	4,000
Oranges	1,655	333
Grapefruit	1,849	2,314
Miscellaneous Citrus varieties tangerines etc.	—	6
Citrus Root Stocks	—	1,500
Coffee	1,278	4,947
Coconuts (Dwarfs)	—	188
Green Vegetable Seedlings	—	643
Green Vegetable Seeds (Packets)	2,876	5,001
Green Vegetable Seeds (lbs)	—	10½
Avocado Pears	36	28
Mangoes	2	341
Plantain Suckers	—	76
Black Pepper	23	100
Corn (ears)	—	80
Cassava Cuttings	—	1,600
Sweet Potatoes (Slips)	4,500	5,125
Elephant Grass (bundles 50 lbs.)	—	55
Pangola Grass (bundles 50 lbs.)	1,000	1,346
Guava	—	10
Sugar Cane	447	—

The Agricultural Stations are operated mainly from a Colonial Development and Welfare grant under scheme D 2621.

In addition funds are provided from the local funds under:

- (i) Expenditure Head 4: Agriculture
Item: Plant Distribution
- (ii) Expenditure Head 4: Agriculture
Item: Soil Analysis & Crop Experiment

81. The following is a statement of the Expenditure under the respective heads:—

	Londonderry Agriculture Station	Grand Bay Agriculture Station	Portsmouth Agriculture Station	La Plaine Agriculture Station	Colihaut Agriculture Station	Botanic Gardens Propagation Centre	Goodwill Propagation Centre
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Scheme E2621							
Capital	1,960.35	507.44	—	592.41	1,451.23	—	—
Recurrent	9,591.86	7,815.69	5,712.20	4,589.21	2,070.11	—	—
TOTAL	11,552.21	8,323.13	5,712.20	5,181.62	3,521.34	—	—
E4: Agriculture							
Plant Distribution	4,930.45	4,136.34	2,468.45	2,021.87	1,012.57	9,581.88	2,239.84
E4: Agriculture							
Soil Analysis							
Crop Exper. ...	277.53	906.70	277.01	427.42	—	437.50	—

RESEARCH

82. Investigational work continued with the following crops:—

Food Crops — Maize, Sweet potatoes, Cassava
 Fodder Crops — Pangola grass
 Orchard Crops — Bananas, Limes.

83. Much of this work as circumstances permitted, took the form of regularly laid out designs capable of statistical analysis; in some cases, however, work of necessity took the form of observation plots.

The response of crops to fertilizer treatments was in most cases the chief object of investigations.

84. *Food Crops*: Maize seed of an American Hybrid called "Dixie" was again used in simple trials to determine the response of this crop to treatments of Nitrogen, Phosphate and of Potash; also to examine the extent to which the hybrid could perform under local conditions.

85. At one locality, the entire stand proved a failure, the plants in the most promising plots having attained an average height of only 18 — 24 inches. At this height, they produced diminutive arrows and died shortly thereafter without having produced tassels.

86. At another locality, performance was more encouraging but yet not satisfactory. Average yield was only 500 lbs. grain per acre.

87. *Sweet Potatoes*: Factorial trials have been laid down to compare the effects of Nitrogen, Phosphate and Potash artificial fertilizers on the yield of the more popular types of sweet potatoes. Yield data now available from one such trial laid down on an alluvial soil type has shown that highest yield was obtained from the application of potash alone, as follows:—

TREATMENT YIELDS

No Fertilizer	1.53 tons per acre
Nitrogen alone	1.89 " " "
Phosphate alone	1.50 " " "
Potash alone	2.03 " " "
Nitrogen & Phosphate	1.60 " " "
Nitrogen & Potash	1.92 " " "
Phosphate & Potash	1.87 " " "
Nitrogen, Phosphate & Potash	1.62 " " "

88. Other work with Sweet Potatoes comprised the collection and multiplication of planting material of several varieties for use in a series of selection and breeding trials in collaboration with the plant-breeding work of the Regional Research Centre at the Imperial College of Tropical Agriculture.

89. *Cassava*: Fertilizer trials with this crop have been continued. The general indications are that applications of Phosphatic fertilizer give increases in yield over applications of Nitrogen and of Potash.

90. *Fodder Crops*: Pangola Grass, introduced in 1955, continued to make satisfactory growth. Its cultivation is being gradually extended to several localities to facilitate the Department's livestock improvement programme where it has been observed to tolerate equally well, extremely wet or dry conditions.

91. It has not yet been found possible to inaugurate grazing trials to determine especially the carrying capacity of the grass, but as with similar crops, and as previously observed, dressings of nitrogen have greatly enhanced yields.

92. The following yields have been obtained from an observation plot from two successive reappings spaced four months apart.

TREATMENTS	YIELDS (TONS PER ACRE)				
N	...	...	...	...	20.90
P	...	...	...	...	6.90
K	...	...	...	...	7.37
NP	...	...	...	...	15.62
NK	...	...	...	...	12.51
PK	...	...	...	...	5.35
NPK	...	...	...	...	13.05
Control	...	...	...	...	5.44

93. *Orchard Crops*: Limes: The lack of suitable and of sufficient land continues to cause difficulty in laying down proper trials with this as well as with other orchard crops.

94. The trial with limes which was commenced in 1956 at Bath Estate continued. As previously reported, dressings of nitrogen caused the fastest rate of growth followed by Potash and Phosphate in the ratio 1.7: 1.5: 1.03 respectively. This growth differential is still maintained, and responses as measured in the yield of fruit will soon be available on the coming into proper fruiting of the plants.

95. *Bananas*: A manorial observation was commenced in a high rainfall area recently cleared of virgin forest and planted immediately to bananas, this being typical of those conditions under which a very high proportion of bananas are produced, particularly by small holders. Equal stands of the crop were treated with single N, P, & K fertilizers at the usual rates.

96. Three months after reaping commenced, the following results were obtained from equal stands of 100 plants.

	NITROGEN			PHOSPHATE	POTASH
Bunches reaped	...	...	...	23	33
Bunches of 6 hands & less	...	...	...	8	13
					17

97. Properly laid out fertilizer factorial trials at three Agricultural Stations suffered from drought during February to April and from high winds during the hurricane season. Nevertheless, yields are being recorded for analysis after the first year of harvesting.

98. *Miscellaneous*: Tea seeds introduced from India were germinated in December 1957 and put out as 6-inch seedlings in the field in May, 1958. Growth has been exceedingly slow.

99. *Soya Beans*: Two varieties of soya beans, a black-seeded and a yellow-seeded variety from the Imperial College of Tropical Agriculture were grown with satisfactory results.

100. *Herbicides*: A soil-sterilizer cum herbicide "vapam" was tried in a small area to observe chiefly its effect in the control of "nut grass". A good kill of soft broadleaf weeds and grasses was observed. Nut grass died back but re-established itself about four weeks afterwards. Soil-dwelling insects in the treated area were killed.

101. *Biological Control*: The Colonial Development and Welfare Scheme for the Biological Control of locally important insect pests continued.

102. The chief activity under the scheme comprised introductions of two banana borer predators "LIEONOTA" and "PLAESIUS" from Trinidad, to ensure a more rapid build up in the population of the predators and the consequent control of the banana borer.

103. During the year, 4,733 predators were introduced as adult insects and liberated in banana fields known to be highly infected with borer.

104. *Agricultural Survey*: A sample Survey of Agriculture designed and directed by officers of a Federal Survey team was conducted throughout the island.

The Agricultural Superintendent functioned as local Liaison Officer for purposes of the survey, while certain members of the local Agricultural Extension Staff assisted in the enumeration. Crude data of the survey was shipped to Trinidad for analysis.

105. The survey is designed to collect data on the acreage and distribution of the chief economic crops and of food crops; the partition and form of tenure of holdings including form of management. An assessment of livestock is also included.

LIVESTOCK

106. Livestock continues to be a section of the local agricultural industry leaving much room for further development. Government encouragement and assistance continues to be available through the Department in the form of stud services of improved sires at nominal charges, limited sales of young breeding stock, assistance in the establishment of pastures, free import duty on fencing wire, and, more recently, the commencement of a pig revolving scheme on an experimental basis. These forms of assistance are but moderately patronized and it is felt that the reason for this lack of interest lies in the failure on the part of the majority of land owners to regard livestock as an integral part of the farming system.

107. The Central Livestock Farm at Goodwill continued operations at a satisfactory level. The following tables reflect the programme of activities and the scope of operations.

108.

	BIRTHS		STUD SERVICES		SALES	
	1957	1958	1957	1958	1957	1958
Cattle	16	17	93	77	5	7
Pigs	60	54	5	27	52	57
Sheep/Goats	10	4	7	19	27	4
Poultry	35	250	—	133 (chicks)	82	201
Eggs	12,758	—	—	—	12,246	—
Milk (qts.)	5,736	6,140	—	—	3,663	3,520

109. *Revenue*:

REVENUE						1957	1958
						\$	\$
Sale of animals						1,761	1,986
Eggs						1,404	2,746
Stud services						73	82
Milk						3,517	3,379
Miscellaneous						65	64

110. *Inventory*:

						31st December, 1957	31st December, 1958
Bulls						6	5
Cows						16	20
Calves						23	16
Yearling heifers						6	15
Pigs						32	27
Sheep/Goats						9	8
Poultry						279	189

111. Three boars and two gilts of the "Large Black" breed were imported from Trinidad and 400 day-old chicks from the U.S.A.

112. Two boars and two bulls were sent to District Agricultural Station for use as sires.

113. With the exception of a few infrequent cases of Mastitis, the general health of animals was satisfactory, Twelve pigs were overlaid and forty poultry died from minor accidents.

114. The planting of "Pangola Grass" was continued in the pasture improvement and extension programme. During the year an additional 2-acre field was established bringing the total area in "pangola" to 50 acres.

115. The overall performance of "pangola" continues to be very satisfactory; the pastures having withstood severe droughts and heavy grazing. Eighty 50-lb bags of the grass were distributed as planting material.

116. There were no visits paid by technical livestock overseas officers during the year.

117. The new building for a resident Head Stockman was completed and occupied in February.

COCOA PROPAGATION

118. Operations continued under Colonial Development and Welfare Scheme D2856. Further work was carried out to expand operations under the scheme where much emphasis was placed on establishing a nursery at the La Plaine unit. Difficulty was encountered with the transport of plants to this remote unit but 1300 plants were nevertheless successfully established during the year.

119. The total quantity of rooted cuttings distributed from propagating units during the year was 48,000 (28,000 in 1957). There was a carry over to 1959 of 18,000 cuttings.

120. The following table summarises propagation and distribution activities during the year.

	Hills- borough	London- derry	Botanic Gardens	Total	Overall Percentages
Cuttings set in bins ...	59,445	23,391	12,662	95,498	—
„ rooted ...	39,488	12,522	10,187	62,197	65
„ hardened ...	29,603	10,944	7,737	48,284	77
Failures during hardening	9,885	1,578	2,450	13,913	22
Rooting percentages ...	66	53	80	—	66
Overall efficiency ...	49%	44%	61%	—	51
Cutting distributed ...	30,443	9,144	8,462	48,049	—

121. The following clones were planted out in nurseries:—

Hillsborough:	I.C.S.	1, 39, 40, 45, 46, 60, 84, 95	— 200	
	D.S.	1, 2, 3	— 124	
	G.S.	29	— 31	355
La Plaine:	I.C.S.	1, 39, 40, 46, 60, 84, 95	— 859	
	D.S.	1, 3, 9	— 333	
	G.S.	29	— 135	1,327
Londonderry:	I.C.S.	45	— 9	
	D.S.	3	— 8	17
GRAND TOTAL				1,699

122. Certain Capital undertakings comprising essentially the erection of Foreman's quarters at La Plaine and the installation of minor fixtures for water supplies remain to be completed. Plans for this work are well in hand.

CROWN LANDS

123. The objectives of the scheme for the control of Crown Lands continue to be the same, viz:—

- (i) To anchor squatters on reasonably good land;
- (ii) To stop further encroachment on Crown Lands, especially in the Forest Reserves;
- (iii) To stop the evils of shifting cultivation; and
- (iv) To enforce adequate measures of control and to institute soil conservation works.

124. The aims of the scheme are being implemented. The more orderly settlement of squatters, hitherto scattered over wide areas, has proved very encouraging, and will tend to bring about more effective agricultural supervision, better land use, and also allow for reduced costs in the provision of roads and other amenities.

125. The Commissioner for Agricultural Development maintained administrative control of Crown lands while the Crown Surveyor exercised technical control over surveyors and survey matters. Mr. A. C. Winston, Crown Lands Officer, was on long leave in the United Kingdom from May to November, 1958, and Mr. C. O. Hill acted during his absence. The scheme provides for the employment of four surveyors but only one was available up to the month of December, 1957 when Mr. J. A. Robinson returned from training in Trinidad and was appointed under the scheme. The Soil Conservation Instructors were engaged in the following:—

- (i) Inspection and determination of suitability of Crown lands for agriculture prior to release.
- (ii) Control of squatters.
- (iii) Investigation of Crown lands' disputes and serving of notices.
- (iv) Assisting in the establishment of Crown land boundaries during surveys.

They also form part of the normal Extension Service, assisting and advising the farmers in proper cultural practices aimed at conserving soil fertility and ultimately the production of higher yield. Soil Conservation Instructors at present work under the immediate supervision of the Agricultural Assistant of their respective districts, viz:— Northern, Southern and Central Districts. Though the Scheme allows for fourteen (14) Soil Conservation Instructors, there was never the full complement engaged in work on Crown lands during the year under review due to leave arrangements and staff diversion.

126. The year 1958 proved to be a marked year in the life of the Crown lands scheme. The question of a revision of the present form of Crown Grant was again brought up in the early part of the year. The present form was thought to be unnecessarily complicated and furthermore did not ensure against the wasteful practice of neglect of land which has long been the custom. This question led to the change in the policy regarding the disposal of Crown lands from outright sale to restricted freehold. The new system calls for the disposal of Crown lands by lease in the first instance for periods of five to ten years with the option to purchase, after having met with certain minimum developments required.

127. The Crown Lands Ordinance No. 1 of 1915 and all its amendments is being repealed and a New Ordinance being made with a view to separating the administration of Crown Lands and Forestry.

128. During the period under review, 3,453 acres of Crown Lands were surveyed. That included survey work at the Cregg-Crown, Hampstead and Mountain, all of which are to be Block settlements in the Northern District. Other surveys were also carried out at En Haut Jean in the heights of Salisbury, Hot Springs in the Portsmouth area, Bense Heights, Woodford Hill heights and Concord area. Sixty-six lots were also checked in the Crapaud Hall settlement area. Other work accomplished during the year is as detailed below:—

- (i) The Completion of the survey of the Morne Diablotin Forest Reserve line (34 miles);
- (ii) Cutting and allocation of some of the lots on the Rosalie settlement;
- (iii) Preparation of maps and plans prior to the Agricultural Field Survey being carried out under C.D. & W. Scheme D 2878 administered by the Government of Barbados.

129. The following figures indicate the progress made in respect of the sale of Crown lands to the end of the year 1958:—

Applications submitted	...	...	...	...	...	...	3,327
Sales approved	...	...	...	...	...	...	1,381
Sales not approved	...	...	...	...	...	...	249
Surveys completed	...	...	...	...	...	...	926
Sales by Auction	...	...	...	...	...	...	221
Crown grants issued	...	...	...	...	...	...	124

130. *Surveys:*

Richmond settlement	...	...	...	...	361	acres	32	lots
Cashimona	„	...	...	...	53	„	7	„
Holmwood	„	...	...	...	70.2	„	8	„
Terre Ferme	„	...	...	...	480	„	36	„
Stone Hill	„	...	...	...	594	„	59	„
Crapaud Hall	„	...	...	...	1,400	„	122	„
Rosalie Leasehold settlement	...	...	...	...	512	„	32	„
Cregg-Crown settlement (incomplete)	...	...	...	...	1,200	„	24	„
Hampstead settlement	...	...	...	...	1,500	„	100	„

131. *Minor Surveys:*

Northern District	...	...	...	...	277	acres	34	lots
New Eastern District road (Rosalie)	...	...	...	...	206	„	5	„
En Haut Jean	...	...	...	...	120	„	15	„
Eastern District	...	...	...	...	134	„	11	„

FORESTRY

132. No Forest Policy has yet been prepared for Dominica. Dr. Beard's proposals for a Forest Policy as outlined in Bulletin No. 11 of the Development and Welfare Organisation have been adopted in principle and are as follows:—

- (a) The execution, together with other Departments, of a Land Use Survey of Dominica to provide the necessary data for land planning.
- (b) On completion of (a) to draw up a complete land allocation and conservation policy of Dominica
- (c) To carry out Forest Reservation and to manage these Reserves in such a manner as to fulfil their protective function in the interests of soil and water conservation, and at the same time to provide the maximum outturn of forest produce on the basis of a sustained yield.
- (d) To carry out research in silviculture, and utilization of forest products.
- (e) To educate and train subordinate staff and the public to the benefit of a properly implemented Forest Policy and to the efficient use of forest products.
- (f) To encourage private forestry and to assist in establishing conservation management.
- (g) To protect nature.

133. *The Forest Estate:* Crown Lands along the Rosalie and Castle Bruce roads were released for sale during this period. In selecting these lands, care has been taken to reserve areas with steep slopes, particularly along the line of the new roads where slides may be expected to occur. The boundaries of the Transinsular road, Forest Reserve and the Roseau River Catchment Reserve were both maintained throughout the year.

134. *Private Lands:* Advice in establishing forest nurseries and planting trees etc. was given by this Department to some estate owners who were interested in establishing wind belts, and small plantations of the more valuable timbers species both indigenous and exotic. Small quantities of seed were supplied to these parties, and demonstration in methods of sowing, trans-planting etc. were given by officers of the Forest Service.

135. *Survey Demarcation and Enumeration:* The Morne Diablotin Forest Reserve survey started in 1957, was completed during this period. Plans have not yet been submitted by the Survey Department. Clearing of the proposed boundaries of the Morne Trois Pitons and Morne Governor forest reserves continued throughout the year.

136. *Communications and Buildings:* Work on the Rosalie and Castle Bruce roads and on the York Valley road continues. The Transinsular road was completed during this period.

The Forest Ranger's house and the two Guard's houses in the Central Range were repaired early in 1958.

137. *Protection:* Patrols and inspections for control and protection of Water Catchment areas and Forest Produce etc. were carried out during this period.

138. *Maintenance of Boundaries:* The boundaries of the Transinsular road, Forest Reserve and the Roseau River Catchment Reserve were maintained by the Guards of the Roseau and Central Ranges.

139. *Silviculture:* With a grant of \$3,000 under C.D. & W., a Silvicultural Scheme was started during this period. Nurseries were established at Goodwill, Brantridge, Londonderry, the Cabrits, La Plaine, Delices and Rosalie. Sample plots of Blue Mahaut, Teak, Laurier Borde Mere and Red Cedar were established at the Cabrits, La Plaine, Bois Migo and in the Gleau Gommier forest along the Transinsular road. Twelve acres of scrub forest have been cleared at the Cabrits and it is proposed to improve the forest in this area by introducing valuable species such as Teak, Mahogany, White Cedar etc.

140. *Seed Collection:* Seed of valuable species were collected by Officers in all ranges throughout the year. Some of this seed was sown in nurseries throughout the island and small quantities were given out to private land owners interested in establishing wind breaks etc.

141. *Nurseries:* In nurseries at the Cabrits and at Londonderry Agricultural Station over 12,000 teak seedlings have been grown. At La Plaine, Rosalie, Delices and Goodwill over 10,000 Blue Mahaut seedlings have been produced.

142. *Plantations:* During this period 4,000 Blue Mahaut seedlings were planted at different points in the Gleau Gommier forest along the Transinsular road. Sample plots of Blue Mahaut, Red Cedar and Caconier were established at Palmist and Bois Migo in the La Plaine Range. One sample plot of 100 Teak seedlings was established at the Cabrits in July. Results in all these areas have so far, been satisfactory.

143. *Utilization:* The number of Pit Sawyers working in Crown Lands remains the same as in 1957 with no increase in sales.

144. *Production and Trade:*

1955	LOGS CU. FT.	SAWN CU. FT.	HEWN CU. FT.	
CROWN LANDS	---	10,991	142	
REVENUE	...	Forest Service Receipts (Forest Service Figures)	...	<u>\$ 2,163.00</u>
1956	LOGS CU. FT.	SAWN CU. FT.	HEWN CU. FT.	
CROWN LANDS	336	4,637	—	
REVENUE	...	Forest Service Receipts (Treasury Figures)	...	<u>\$88,573.00</u>
1957	LOGS CU. FT.	SAWN CU. FT.	HEWN CU. FT.	
CROWN LANDS	4,465	5,052	533	
REVENUE	...	Forest Service Receipts (Treasury Figures)	...	<u>\$ 1,474.00</u>
1958	LOGS CU. FT.	SAWN CU. FT.	HEWN CU. FT.	
CROWN LANDS	1,466	5,447	402	
REVENUE	...	Forest Service Receipts (Forest Service Figures)	...	<u>\$ 1,309.00</u>

145. *Education:* The usual talks on Forestry at Schools and to the Public in different parts of the island were given by the Forest Supervisor during this period.

146. *Staff and Labour:* The Staff in 1958 was as follows:—

J. M. Cave	Chief Forest Officer (Com. for Agric. Dev.)
C. O. Hill	Forest Supervisor
P. J. Mellow	Forest Ranger, Roseau Range
R. E. James	" " Portsmouth Range
H. C. Joseph	" " La Plains Range
E. Baptiste	" " Central Range
S. Matthew	Forest Guard
B. Williams	" "
H. A. Emanuel	" "
F. Tongue	" "
C. R. Julien	" "
Q. Greenaway	" "
C. Vigilant	" "
A. C. Sorhaindo	" "
R. Jno. Charles	Forest Guard
C. M. Lewis	Clerk

147. *Leave:*

R. E. JAMES	...	...	...	Casual Leave	8.8.58 — 17.8.58
"	...	...	...	Vacation Leave	6.10.58 — 10.11.58
S. MATTHEW	...	...	...	Sick Leave	9.3.58 — 8.5.58
"	...	...	...	" "	9.4.58 — 9.5.58
E. BAPTISTE	...	...	...	Vacation Leave	10.10.58 — 20.12.58
B. WILLIAMS	...	...	...	" "	11.8.58 — 15.9.58
H. A. EMANUEL	...	...	...	" "	1.5.58 — 5.6.58
"	...	...	...	Sick Leave	28.7.58 — 2.8.58
"	...	...	...	" "	2.8.58 — 9.8.58
"	...	...	...	" "	18.8.58 — 23.8.58
"	...	...	...	" "	25.11.58 — 30.11.58
P. J. MELLOW	...	...	...	" "	17.3.58 — 19.3.58
"	...	...	...	" "	24.3.58 — 30.3.58
"	...	...	...	Casual Leave	11.6.58 — 26.6.58
F. TONGUE	...	...	...	Sick Leave	6.1.58 — 12.1.58
"	...	...	...	Vacation Leave	14.7.58 — 23.9.58
C. R. JULIEN	...	...	...	" "	19.1.58 — 23.2.58
H. C. JOSEPH	...	...	...	Sick Leave	21.3.58 — 27.8.58
C. VIGILANT	...	...	...	Vacation Leave	12.11.58 — 5.12.58

148. *Miscellaneous:* Sir Harry and Lady Champion visited Dominica in January 1958 and spent a few days seeing the forest in different parts of the island.

Mr. Barnes, Adviser on Forestry to the Federal Government visited this island in October, 1958.

Mr. H. Fraser, Conservator of Forests Windward Islands, visited Dominica in January and April, 1958.

Mr. C. O. Hill, Forest Supervisor attended the West Indian Forestry Conference held in Trinidad in January, 1958.

FISHERIES

149. A Colonial Development & Welfare Scheme, D.3462 was approved in June. The Scheme is designed to provide means to overcome the short supply of fish in the island and contains provision to assist fishermen in purchasing better fishing boats; in securing more efficient gear, and in receiving training in the modern techniques of catching fish. The total grant of the Scheme is \$17,763.

150. A Fisheries Officer, Clerk and Mechanic were recruited and were made to understudy for two months in Barbados the appropriate aspects of the fishing industry.

151. A launch was purchased locally in September for use for research and demonstration purposes. Orders were placed for fishing gear, a depth recorder, a radio telephone and other equipment for use with the research launch.

152. A launch of the type proposed to make available to fishermen under a hire purchase system, was secured in October from Barbados. Later during the year, the Fisheries Officer returned to Barbados to obtain material for building the remaining seven launches, eight being the total number planned for use in the hire-purchase arrangement.

153. Dr. F. Salmon of Caribbean Commission visited in February. During his visit he collected statistics pertaining to the local fishing industry, including the number and distribution of fishermen, the extent to which they are engaged in actual fishing and the volume of catches.

154. The Fisheries Officer commenced the training of a few fishermen in catching techniques.

STAFF NOTES

155. The Commissioner for Agricultural Development attended the meeting of the Governing Body of the Eastern Caribbean Farm Institute in Trinidad. He also served on the following local Boards:—

Dominica Limes Association
Board of Management, Dominica Banana Grower's Association
Agricultural Advisory Committee
Leaf Spot Board of Control
Central Housing & Planning Authority
Board of Education.

156. The Assistant Agricultural Superintendent went on overseas vacation leave from 26th June, 1958 to 9th January, 1959.

The Veterinary Officer went on overseas vacation leave from 7th December, 1958 to 9th May, 1959.

VISITORS

157. The following is a list of overseas visitors to the Department during the year.

W. HAMMOND	...	...	...	International Harvester Representative of Messrs. H. E. Robinson, Trinidad.
W. R. E. NANTON	...	...	...	Agricultural Survey Officer, Federal Government.
LORD HASTINGS	...	...	...	Commonwealth Parliamentary Association, United Kingdom.
MR. A. BLENKINSOP	...	...	...	Commonwealth Parliamentary Association, United Kingdom.
R. LEACH	...	...	...	Director of Research, Banana Board, Jamaica.
R. E. OSBORNE	...	...	...	Chief Agronomist, Ministry of Agriculture, Jamaica.
N. W. SIMMONDS	...	...	...	Senior Cytogeneticist, R.R.C., I.C.T.A., Trinidad.
G. CADET	...	...	...	Acting Agricultural Superintendent, St. Lucia.
J. EVANS	...	...	...	Colonial Development Corporation, U.K.
J. SPENCE	...	...	...	Plant Pathologist, Dept. of Agriculture, Trinidad.
H. FRASER	...	...	...	Conservator of Forests, Windward Islands.
C. JEFFERS	...	...	...	Department of Agriculture, Montserrat.
B. SMITH	...	...	...	"Ammophos" fertilizer Representative, Messrs. H. E. Robinson, Trinidad.
H. MILLIKEN	...	...	...	Agricultural Economist, Federal Government, Trinidad.
MESSRS. BAYERSTOCK & FOLLEY	...	...	...	Colonial Office, United Kingdom.
W. M. CAMPBELL	...	...	...	Curator, Royal Botanic Gardens, Kew.
K. C. VERNON	...	...	...	Soil Survey R.R.C., Trinidad.
J. WOODWARD	...	...	...	Pest Research, Grain Storage, U.K.
L. MOSS	...	...	...	I.C.A. Representative, Trinidad.

APPENDIX I
PRINCIPAL EXPORTS FOR THE YEAR 1958

COMMODITY & DESTINATION	QUANTITY		F.O.B. VALUE IN THOUSAND OF DOLLARS
	Unit	1958	1958
Fresh Fruit			
BANANAS:—			
United Kingdom	1,000 stem	1,628	3,706
British West Indies	" "	8	10
Other Countries	" "	2	3
TOTAL	1,000 stem	1,638	3,719
GRAPEFRUIT:—			
United Kingdom	C/crate	10,816	68
British West Indies	" "	2,893	11
Other Countries	" "	629	5
TOTAL	C/crate	14,338	84
ORANGES:—			
United Kingdom	C/crate	2,129	12
British West Indies	" "	1,973	10
Other Countries	" "	841	7
TOTAL	C/crate	4,943	29
Preserved Fruits			
CANNED GRAPEFRUIT SEGMENTS:—			
United Kingdom	1,000 lbs.	425	123
New Zealand	" "	—	—
British Guiana	" "	1	—
British West Indies	" "	—	—
Canada	" "	—	—
TOTAL	1,000 lbs.	426	123
Preserved Fruit			
POMACE OF DRIED LIME SKIN:—			
United Kingdom	1,000 lbs.	274	70
TOTAL	1,000 lbs.	274	70
OTHER PRESERVED LIME SKIN:—			
United Kingdom	1,000 lbs.	—	—
TOTAL	1,000 lbs.	—	—
Lime Juice: Settled			
United Kingdom	1,000 gals	477	718
Australia & New Zealand	" "	44	69
British West Indies	" "	18	29
Canada	" "	20	37
U.S. America	" "	12	23
Other Countries (1)	" "	10	19
TOTAL	1,000 gals.	581	895
Lime Juice: Top Pulp			
United Kingdom	1,000 gals.	137	259
Canada	" "	1	3
U.S. America	" "	1	2
Bermuda	" "	5	11
TOTAL	1,000 gals.	145	275
Cocoa			
COCOA BEANS:—			
Canada	1,000 lbs.	123	79
U.S. America	" "	193	118
United Kingdom	" "	17	8
West Germany	" "	—	—
Holland	" "	—	—
TOTAL	1,000 lbs.	333	205
Spices			
VANILLA BEANS:—			
Bermuda	100 lbs.	2	3
U.S. America	" "	103	137
Canada	" "	10	14
British West Indies	" "	—	—
TOTAL	100 lbs.	115	153

APPENDIX I—Continued
PRINCIPAL EXPORTS FOR THE YEAR 1958

COMMODITY & DESTINATION	QUANTITY		F.O.B. VALUE IN THOUSAND OF DOLLARS
	Unit	1958	1958
Copra			
COPRA:—			
Barbados	Long Ton	985	295
TOTAL	Long Ton	985	295
Essential Oils			
BAY OIL:—			
U.S. America	1,000 lbs.	15	44
United Kingdom	" "	17	42
Other Countries	" "	5	16
TOTAL	1,000 lbs.	37	102
Distilled Lime Oil			
United Kingdom	1,000 lbs.	38	470
Australia	" "	4	56
Other Countries	" "	1	13
TOTAL	1,000 lbs.	43	539
Floor Mats			
MATS OF STRAW:—			
British West Indies	1,000 sq. ft.	53	29
British Guiana	" "	1	1
U.S. America	" "	11	7
Bermuda	" "	13	5
U.S. Dependencies	" "	13	8
Other Countries	" "	5	2
TOTAL	1,000 sq. ft.	97	52

APPENDIX II
METEOROLOGICAL RECORD

1958 MONTH				REL. HUM. MEAN		MAX. TEMP. MEAN	MIN. MEAN	BAROMETRIC PRESSURE MEAN	
				a.m.	p.m.	a.m.	a.m.	a.m.	p.m.
January	...	...	...	76	66	87	67	29.979	29.943
February	...	...	...	69	63	87	68	30.016	29.973
March	...	...	...	65	62	90	69	29.999	29.937
April	...	...	...	68	62	91	70	29.979	29.938
May	...	...	...	73	66	91	72	29.956	29.923
June	...	...	...	74	64	91	72	30.026	29.967
July	...	...	...	76	67	92	71	29.977	29.959
August	...	...	...	81	67	90	72	29.927	29.899
September	...	...	...	79	72	90	71	29.918	29.889
October	...	...	...	76	70	89	70	29.935	29.900
November	...	...	...	77	67	87	70	29.946	29.892
December	...	...	...	81	70	85	68	29.977	29.927
YEARLY MEAN				75	66	89	70	29.970	29.929

						Month Date
Highest Barometer reading	...	30.150	...	...	...	June 23rd 1958
Lowest Barometer reading	...	29.801	...	...	...	Sept. 25th 1958
Highest Max. Temperature	...	94°	...	...	...	July 11th 1958
Lowest Min. Temperature	...	66°	...	...	...	Dec. 22nd 1958
Greatest Rainfall in 24 hrs.	...	6.04	...	...	...	Oct. 1st 1958

APPENDIX III

RAINFALL AT THE BOTANIC GARDENS, DOMINICA, 1934—1958

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	25 years 1934—1958 Mean
1934	4.81	2.37	3.46	3.24	6.73	4.13	1.67	5.00	4.16	5.70	4.24	1.76	6.12	9.23	5.95	2.06	9.87	5.96	1.85	3.94	5.36	1.84	5.49	5.99	1.79	4.51
January ...	1.70	1.59	2.50	3.40	1.43	2.84	1.45	.47	2.25	1.01	6.89	9.14	5.86	2.07	4.54	6.44	3.59	2.92	1.59	4.89	2.57	1.13	5.64	2.75	.13	3.15
February ...	3.36	6.90	.82	1.34	2.69	4.38	2.16	2.05	.97	5.46	1.89	1.29	1.47	2.75	1.48	2.73	3.75	1.88	1.38	4.11	3.04	1.86	4.91	0.40	1.83	2.59
March ...	2.91	1.45	3.94	2.61	.72	5.62	1.00	2.82	7.14	3.34	1.65	1.11	2.88	2.61	2.11	1.46	1.89	3.84	4.25	4.55	4.49	.87	3.66	2.36	1.94	2.85
April ...	3.82	4.27	2.34	1.48	1.41	.86	1.34	5.53	4.86	3.20	8.55	1.95	3.18	5.53	4.60	2.58	10.37	13.20	4.31	7.29	2.64	3.19	3.60	1.05	6.01	4.29
May ...	2.59	5.04	6.47	6.57	19.56	4.90	4.65	5.39	9.18	6.25	7.20	6.21	7.04	4.67	6.12	13.02	12.64	10.54	9.66	6.83	5.74	6.80	10.95	3.37	13.23	7.78
June ...	9.54	13.47	18.48	5.60	13.44	7.18	7.97	13.94	13.86	6.10	12.98	11.17	6.15	11.73	12.84	11.41	10.00	8.32	13.19	16.32	11.97	7.56	8.01	18.15	14.79	11.29
July ...	7.61	8.87	10.36	6.20	27.92	6.96	6.96	7.52	11.13	10.93	9.19	9.05	9.44	5.73	8.41	9.69	8.18	10.36	9.83	8.89	11.55	7.94	11.97	8.38	10.18	9.73
August ...	4.08	12.93	11.14	4.40	10.77	6.52	2.55	10.62	11.76	7.99	5.74	15.43	8.34	8.09	8.67	12.75	4.90	9.69	6.25	14.35	18.08	5.95	4.44	5.44	12.27	8.93
September ...	3.89	5.43	7.65	3.74	4.48	15.42	9.00	6.98	5.91	9.69	6.39	10.90	4.40	4.02	8.40	9.32	14.14	4.80	8.04	4.95	8.15	5.43	10.11	13.80	12.20	7.89
October ...	5.58	3.39	12.14	20.85	12.34	5.91	10.97	12.45	24.82	5.38	9.59	2.98	13.91	7.10	9.37	2.68	8.00	7.82	9.10	6.20	8.34	9.52	10.42	21.78	5.50	9.85
November ...	9.46	6.24	10.84	5.43	6.14	3.57	9.96	4.81	8.47	9.60	6.81	4.33	4.34	8.67	6.97	5.81	3.62	6.74	1.91	7.43	2.38	2.16	6.83	7.62	5.61	6.23
December	59.35	71.95	89.26	74.86	104.63	68.29	59.68	77.58	104.51	71.65	81.12	75.32	73.07	72.20	79.46	79.95	93.95	86.07	81.36	89.75	36.11	54.25	86.03	88.58	85.48	77.78

Average Annual Rainfall 1934—58 77.78 inches

